

**ARI Research Note 2003-12**

**Gender Integration of Basic Combat Training and  
Career Intent of Enlisted First-Term Soldiers**

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# GENDER INTEGRATION OF BASIC COMBAT TRAINING AND CAREER INTENT OF ENLISTED FIRST-TERM SOLDIERS

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## Introduction

An enduring concern of the U.S. Army is that it provides the best training possible for its new enlisted recruits. The effectiveness of entry training for new recruits is a complex issue. Part of the issue involves the approach to integrating males and females into the fighting force that they together compose. Under current circumstances, all entering females undergo entry training in gender-integrated classes. Largely depending on their Military Occupational Specialty (MOS), males are trained in male only or gender-integrated classes.

This report describes the career intent of soldiers that trained in gender-integrated or single gender settings, as well as differences in the adaptation of these groups of soldiers. Findings on these issues are based on data collected as part of a research project on the attrition and retention of soldiers who entered the Army in Fiscal Year 1999 (FY99).

### *Past ARI Studies*

The Initial Entry Training (IET) of a U.S. Army soldier consists of Basic Combat Training (BCT) followed by Advanced Individual Training (AIT). BCT is an eight-week program during which soldiers must pass the Army Physical Fitness Test (APFT), Individual Proficiency Tests (IPT), and Basic Rifle Marksmanship test (BRM). The length and type of AIT that a soldier completes depends on the MOS to which that soldier has been assigned. The alternative to BCT and AIT is One Station Unit Training (OSUT), which combines the two parts of IET into one program. Upon completion of IET (BCT-AIT or OSUT), soldiers are assigned to an Army unit.

Soldiers in Combat Support (CS) and Combat Service Support (CSS) MOS are trained in Gender-Integrated (GI) IET. Soldiers in Combat MOS are generally trained in single gender (male only) environments. The Army introduced gender integration of basic training in the late 1970's. Until September 1976, female and male soldiers underwent different training programs.

From September to November 1976, the Army tested a common program of instruction for females and males and found several problems with this approach. For instance, women did not meet the men's physical fitness standards, and the uniforms assigned to women were inadequate. It was also concluded that male instructors were not prepared to train women (General Accounting Office, 1996). The gender-integrated approach was discontinued in 1982 but reinstated in August 1994 for non combat MOS.

The U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) conducted a series of studies on the attitudes of soldiers-in-training and training cadre during squad-level gender-integrated BCT (Mottorn & Simutis, 1997). One study was conducted in 1993 at Fort Jackson, South Carolina, and the sample included companies (from two training battalions) that were all male, all female, 75% male and 25% female, or 50% male and 50% female. In 1994, a study was conducted from June to August at Fort Leonard Wood, Missouri, and the sample consisted of gender-integrated companies (from one training battalion) that were 75% male and 25% female. Another study was conducted from April to September 1995 at Fort Jackson and Fort Leonard Wood, and results were compared to those obtained from earlier

investigations (Mottern, Foster, Brady, & Marshall-Mies, 1997). The 1995 sample came from ten gender-integrated companies from three training battalions. Common to all studies was administration of questionnaires to soldiers before BCT and at the end of BCT.

One finding of these studies was that in general, soldier attitudes toward the Army remained positive throughout BCT. However, males in single gender companies reported the most positive attitudes during BCT, and females in single gender companies reported the least positive attitudes. Responses given at the pre-training survey showed that males were more confident than females. That is, there was a gender difference prior to training. Among females, those in gender-integrated training classes were more positive and pushed themselves harder than females in single gender companies. Females in gender-integrated settings reported higher levels of soldierization (i.e. pride and commitment, individual improvement, morale, teamwork and cohesion) and platoon morale than their counterparts in all-female training. Also, gender-integrated male soldiers reported the same or higher levels of soldierization than males in single gender settings. As the ARI newsletter (1995) underscored, differences in performance due to training mode were not supported, as rates of first-time success on the APFT did not differ significantly in single gender companies and gender-integrated companies. The researchers found that in gender-integrated training, females improved in all APFT events (sit-ups, push-ups, run) and males improved in two of the three events. Overall, female soldiers were more positive about training in a gender-integrated environment than were males (Mottern & Simutis, 1994).

The results of the 1993 and 1994 studies indicate that gender-integrated BCT is much more positive for female soldiers than single gender training and that there is no detriment to the training of male soldiers. The findings summarized by Mottern et al. (1997) supported the conclusion that the gender-integrated approach to training increased the performance of female soldiers and did not decrease the performance of males. Mottern et al. (1997) also examined the possible effect of gender-integration on attrition from BCT and found no such relationship. Gender-integrated training was found to increase the physical performance of both male and female soldiers.

### *Current Effort*

*ARI Attrition Project.* ARI has an ongoing project, known as First Term, that seeks to increase the Army's understanding of first-term enlisted attrition and retention. In this project, all soldiers that entered the Army in Fiscal Year 1999 (the FY99 Cohort) are being studied over the course of their first term of enlistment. The First Term database combines data gathered from administrative files with data based on responses to questionnaires administered at entry (the Soldier Reception Survey or SRS) and at the ends of training classes (e.g., BCT and AIT or OSUT). Because the First Term data include all FY99 soldiers, use of this data allowed for comparison between male and female soldiers, with the males soldiers distinguished by participation in either single gender (SG) or gender-integrated (GI) training classes. Because the End Of Training (EOT) survey was administered twice, the First Term survey data allow for comparison between responses at up to three points during IET: at reception, at the end of BCT, and again at the end of AIT, or at reception and at the end of OSUT.



*Objectives.* The purpose of the current study is to investigate differences among soldiers that participate in IET differentiated by gender mix. Specifically, measures of career intentions and adaptation to Army life were compared among male and female soldiers in single gender and gender-integrated IET. These variables were examined at the beginning, middle, and end of IET. This examination over the full course of IET extends previous ARI studies of gender integration. These earlier efforts have investigated relationships from reception to only the end of BCT (Mottern et al., 1997; Mottern & Simutus, 1994; Harrell & Miller, 1997; General Accounting Office, 1996).

## Method

### *Sample*

The principal sample was drawn from the FY99 soldiers that had trained in separate BCT and AIT courses. The sample consisted of the FY99 male and female soldiers who had taken part in one of two types of BCT, single gender or gender-integrated BCT. To control for MOS, only those soldiers in AIT courses that included soldiers from both types of BCT (i.e., single gender and gender-integrated) were eligible for the sample. These eligible soldiers were reduced to those soldiers who had completed an SRS and an EOT at the end of BCT. This sampling design allowed for comparisons among female soldiers trained in gender-integrated settings, male soldiers in single gender settings, and male soldiers in gender-integrated settings.<sup>1</sup> A subset of this group, that had also completed a survey at the end of AIT, was used for comparisons between stages of training (Table 1)<sup>2</sup>.

To provide information on the general consistency of findings for the BCT-AIT sample, a secondary sample was drawn that consisted of the FY99 soldiers participating in single gender or gender-integrated OSUT classes. MOS was not controlled in this sample as it included any OSUT soldier having completed both the reception and end of training (OSUT) questionnaires (see Table 2).

These sampling procedures altogether yielded six comparison groups. The three main groups were males in single gender BCT-AIT, males in gender-integrated BCT-AIT, females in gender-integrated BCT-AIT. The secondary groups consisted of males in single gender OSUT, males in gender-integrated OSUT, and females in gender-integrated OSUT.

The demographics of the sampled soldiers were examined for differences between groups and for differences from the overall FY99 Cohort. (Appendix B). Soldiers in the six groups did not differ significantly from each other in terms of demographic characteristics examined.

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<sup>1</sup> This sampling procedure excluded BCT-AIT soldiers in MOS for which the AIT courses were not fed by both gender-integrated and single gender BCTs. Excluded MOS, obtained through separate BCT and AIT courses, consisted of the following: 12B Combat Engineer, 13B Canon Crewmember, 27M MLRS Repairer, 35R Avionic Radar Repairer, 46R Broadcast Journalist, 55D Explosive Ordnance Disposal Specialist, 68H Aircraft Pneudraulics Repairer, 73D Accounting Specialist, 74C Telecommunications Operator-Maintainer, 74G Telecommunications Computer Operator-Maintainer, 76J Medical Supply Specialist, 91D Operating Room Specialist, 91S Preventive Medicine Specialist, 96B Intelligence Analyst, 96D Imagery Analyst, 96R Ground Surveillance System Operator, 96U Unmanned Aerial Vehicle Operator, 98C Signals Intelligence Analyst, 98G Voice Interceptor, 98H Morse Interceptor, 98J Noncommunications Interceptor Analyst, 98K Non-Morse Interceptor/Analyst, 98X Signals Intelligence Specialist

<sup>2</sup> Soldiers assigned to MOS excluded from this study and soldiers with missing survey data were excluded from analyses. However, they were compared to the FY99 cohort in terms of demographic information available from Army administrative files to detect fundamental differences between the groups that may have resulted from selection processes (Appendix A). Only male soldiers excluded from the study were examined in the demographic comparison because of the small number of excluded females. The excluded samples were younger than FY99 soldiers in general, as were the included samples. However, the excluded sample in gender-integrated BCT scored higher on the AFQT than both the excluded sample in single gender BCT and the full FY99 cohort. The distributions of race and education tier of the excluded samples did not differ greatly from FY99 soldiers in general.

These characteristics were: race, age, Armed Forces Qualification Test (AFQT) category (highest scores in category I), and Education Tier. In addition, Appendix B shows that the groups did not differ greatly from FY99 soldiers (N=63,938) in terms of relative distributions across the levels of race, age, education and AFQT scores. However, the male groups were younger and had a higher proportion of white soldiers than the average FY99 soldier, and the female BCT-AIT group had a higher proportion of black soldiers than the full cohort.

Table 1

FY99 soldiers in two types of BCT by gender and completed surveys.

Type of Training	Gender	Surveys Available	
		At least Reception and End of BCT	Reception, End of BCT and End of AIT
Single Gender	Male	3620	1120 out of 3620
Gender-Integrated	Male	5029	2098 out of 5029
	Female	1804	605 out of 1804
Total		10453	3823 out of 10453

Table 2

FY99 soldiers in two types of OSUT by gender and completed surveys.

Type of Training	Gender	Surveys Available
		At least Reception and End of OSUT
Single Gender	Male	3138
Gender-Integrated	Male	480
	Female	160
Total		3778

### *Measures and Analyses*

*Independent Variables.* The two principal independent variables were gender and gender mix of training. The primary analysis sample consisted of BCT-AIT soldiers, with the secondary sample consisting of OSUT soldiers. As indicated earlier, for both the primary and secondary samples, there were groups representing single gender and gender-integrated BCT for males but only gender-integrated BCT for females.

*Dependent Variables.* Six dependent variables, pertaining to adaptation and career intentions, were measured. Two of these, career intent and confidence, were measured at reception and at the end of each training stage. The remaining four variables were assessed at the end of each training stage (but not at reception). The four variables were self-rated performance as a soldier and satisfaction with each of MOS, soldier life, and training. Soldiers responded to the questionnaire items by selecting one of five or six alternatives, with the

alternatives assigned values (from 1 to 5, or 6) indicative of their positivity toward the variable measured by the item (see Appendix C).

The adaptation variables were measured by either single items or by multiple items for combination into scales. Career intent was measured as a single item (Appendix C). A score for training satisfaction was calculated as the average of responses to five items relating to the general quality of training and to the extent recent training had contributed to professional development, instilled Army values, and provided preparation for Army duties and future assignments. Reliabilities for the training satisfaction scale at the ends of BCT, AIT, and OSUT were high (Cronbach's  $\alpha$  = .79, .83, and .80, respectively). Self-rated performance was calculated as the average of soldiers' predictions of how they would be rated (in comparison to other soldiers in the training company) on four dimensions by their drill sergeant. These dimensions were effort, personal discipline, physical fitness, and overall effectiveness. Reliabilities for this self-rated performance scale at the ends of BCT, AIT, and OSUT were also high (Cronbach's  $\alpha$  = .80, .83, and .80, respectively). Four confidence items were common to all surveys. These items related to confidence that one would adapt to Army life, complete the term of obligation, meet Army physical requirements and earn promotions in the Army. The average of responses to these items served as a confidence score for each soldier. Cronbach's  $\alpha$  for the confidence scale on all survey administrations ranged from .83 - .87.

*Analyses.* One-way analyses of variance were conducted for responses gathered at three points during IET. The soldiers, grouped by gender mix of training (for males) and gender, were compared on the six measures of career intent and adaptation. For each dependent variable (for which the  $F$  statistic was statistically significant), post hoc comparisons (Scheffé tests) were computed within training type. These tests were conducted at reduced alpha levels ( $p > .001$ ) to control for family-wise error rates. Descriptive statistics for the secondary, OSUT sample are presented for inspection, but differences are confounded by sample size and by MOS composition.

Groups in BCT-AIT were also examined for temporal change. Changes were calculated by subtracting the mean response at the end of BCT from the mean response at the end of AIT. An analysis of variance was conducted for each of the six dependent variables. For each analysis with a statistically significant  $F$  statistic, a post hoc comparison (Scheffé tests) was computed ( $p > .01$ ).

## Results

### Intercorrelations

Responses to the surveys administered after BCT, AIT, and OSUT were correlated (Table 3). All correlations were positive and statistically significant,  $p < .05$ , two-tailed. The relationships tended to increase in magnitude from the completion of BCT to the end of AIT, with correlations involving satisfaction with MOS tending to increase the most consistently. When examined within training type (single gender or gender-integrated), correlations of the three groups tended to be similar. Correlations for soldiers at the end of OSUT closely approximated the correlations obtained for soldiers at the end of BCT.

Table 3

Intercorrelations of variables at three EOT survey administrations.

	career intent	confidence	satisfaction with MOS	satisfaction with soldier life	satisfaction with training
confidence	.36/.42/.38				
satisfaction with MOS	.14/.24/.27	.25/.33/.36			
satisfaction with soldier life	.33/.43/.34	.43/.52/.42	.29/.39/.43		
satisfaction with training	.25/.34/.24	.39/.48/.37	.22/.40/.33	.43/.52/.46	
self-rating	.18/.21/.18	.45/.50/.45	.13/.21/.16	.24/.28/.22	.30/.37/.29

Note. In each cell, correlation coefficients for BCT data appear first, for AIT data appear second, and for OSUT data appear third. See Tables 1 and 2 for sample sizes.

### Group Comparisons

**General finding.** For all variables, a relatively consistent pattern was obtained. That is, soldiers in the three BCT-AIT groups responded relatively favorably at the three questionnaire administrations. Differences by gender and type of training were relatively small. The small differences that were statistically significant tended to indicate more positive outcomes for soldiers who had undertaken gender-integrated BCT. Comparisons between the male groups tended to favor the male soldiers with gender-integrated training.

**Basis for finding.** Tables 4 - 9 show group means for career intent and the adaptation items. As these tables show, average responses were generally favorable and similar for the three groups of soldiers undergoing BCT-AIT courses. In 10 of 14 comparisons, however, the small differences between means were statistically significant due to the large sample sizes in the three groups.

Table 4

Career intent of BCT-AIT and OSUT soldiers by gender composition of training.

Career Intent at		Type of BCT			Type of OSUT		
		Single Gender	Gender-Integrated		Single Gender	Gender-Integrated	
		Males	Males	Females	Males	Males	Females
Reception	<b>M</b>	<b>3.03</b>	<b>3.33</b>	<b>3.35</b>	<b>3.32<sup>A</sup></b>	<b>3.06<sup>A</sup></b>	<b>2.91</b>
	SD	1.45	1.50	1.43	1.47	1.46	1.27
End of BCT	<b>M</b>	<b>2.99<sup>a,b</sup></b>	<b>3.32<sup>a</sup></b>	<b>3.40<sup>b</sup></b>			
	SD	1.46	1.55	1.48			
End of IET	<b>M</b>	<b>2.73<sup>c,d</sup></b>	<b>3.00<sup>c</sup></b>	<b>3.10<sup>d</sup></b>	<b>3.01</b>	<b>2.91</b>	<b>2.80</b>
	SD	1.53	1.55	1.55	1.49	1.48	1.33

Notes. Same superscripts denote significantly different means ( $p < .001$ ).

See Tables 1 and 2 for sample sizes.

Table 5

Confidence of BCT-AIT and OSUT soldiers by gender composition of training.

Confidence at		Type of BCT			Type of OSUT		
		Single Gender	Gender-Integrated		Single Gender	Gender-Integrated	
		Males	Males	Females	Males	Males	Females
Reception	<b>M</b>	<b>4.11<sup>e</sup></b>	<b>4.22<sup>e,f</sup></b>	<b>4.07<sup>f</sup></b>	<b>4.32<sup>B</sup></b>	<b>4.29<sup>C</sup></b>	<b>3.98<sup>B,C</sup></b>
	SD	0.81	0.80	0.84	0.74	0.75	0.89
End of BCT	<b>M</b>	<b>4.17<sup>g</sup></b>	<b>4.24<sup>g,h</sup></b>	<b>4.15<sup>h</sup></b>			
	SD	0.76	0.78	0.78			
End of IET	<b>M</b>	<b>3.94<sup>i</sup></b>	<b>4.13<sup>i</sup></b>	<b>4.03</b>	<b>4.22<sup>D</sup></b>	<b>4.21<sup>E</sup></b>	<b>3.91<sup>D,E</sup></b>
	SD	0.88	0.80	0.80	0.75	0.71	0.84

Notes. Same superscripts denote significantly different means ( $p < .001$ ).

See Tables 1 and 2 for sample sizes.

Table 6

Satisfaction with MOS of BCT-AIT and OSUT soldiers by gender composition of training.

Satisfaction with MOS at		Type of BCT			Type of OSUT		
		Single Gender	Gender-Integrated		Single Gender	Gender-Integrated	
		Males	Males	Females	Males	Males	Females
End of BCT	<b>M</b>	<b>3.74</b>	<b>3.73</b>	<b>3.72</b>			
	SD	1.07	1.11	1.11			
End of IET	<b>M</b>	<b>3.55<sup>i</sup></b>	<b>3.73<sup>i</sup></b>	<b>3.73</b>	<b>3.74<sup>F</sup></b>	<b>4.09<sup>F</sup></b>	<b>4.08</b>
	SD	1.17	1.13	1.07	1.19	1.06	0.91

Notes. Same superscripts denote significantly different means ( $p < .001$ ).

See Tables 1 and 2 for sample sizes.

Table 7

Satisfaction with soldier life of BCT-AIT and OSUT soldiers by gender composition of training.

Satisfaction with Soldier Life at		Type of BCT			Type of OSUT		
		Single Gender	Gender-Integrated		Single Gender	Gender-Integrated	
		Males	Males	Females	Males	Males	Females
End of BCT	<b>M</b>	<b>3.58<sup>k</sup></b>	<b>3.66<sup>l</sup></b>	<b>3.76<sup>k,l</sup></b>			
	SD	0.90	0.89	0.84			
End of IET	<b>M</b>	<b>3.30</b>	<b>3.42</b>	<b>3.49</b>	<b>3.49</b>	<b>3.59</b>	<b>3.59</b>
	SD	1.02	1.00	1.00	0.93	0.81	0.79

Notes. Same superscripts denote significantly different means ( $p < .001$ ).

See Tables 1 and 2 for sample sizes.

Table 8

Satisfaction with training of BCT-AIT and OSUT soldiers by gender composition of training.

Satisfaction with Training at		Type of BCT			Type of OSUT		
		Single Gender	Gender-Integrated		Single Gender	Gender-Integrated	
		Males	Males	Females	Males	Males	Females
End of BCT	<b>M</b>	<b>3.66<sup>m,n</sup></b>	<b>3.73<sup>m</sup></b>	<b>3.79<sup>n</sup></b>			
	SD	0.80	0.81	0.74			
End of IET	<b>M</b>	<b>3.47</b>	<b>3.58</b>	<b>3.57</b>	<b>3.55</b>	<b>3.66</b>	<b>3.67</b>
	SD	0.87	0.83	0.78	0.82	0.79	0.74

Notes. Same superscripts denote significantly different means ( $p < .001$ ).

See Tables 1 and 2 for sample sizes.

Table 9

Self-ratings of BCT-AIT and OSUT soldiers by gender composition of training.

Self-Ratings at		Type of BCT			Type of OSUT		
		Single Gender	Gender-Integrated		Single Gender	Gender-Integrated	
		Males	Males	Females	Males	Males	Females
End of BCT	<b>M</b>	<b>3.65<sup>o</sup></b>	<b>3.74<sup>o</sup></b>	<b>3.48<sup>o</sup></b>			
	SD	0.81	0.81	0.82			
End of IET	<b>M</b>	<b>3.67<sup>p</sup></b>	<b>3.81<sup>p,q</sup></b>	<b>3.57<sup>q</sup></b>	<b>4.22<sup>G</sup></b>	<b>4.21<sup>H</sup></b>	<b>3.91<sup>G,H</sup></b>
	SD	0.86	0.81	0.85	0.75	0.70	0.84

Notes. Same superscripts denote significantly different means ( $p < .001$ ).

See Tables 1 and 2 for sample sizes.

All 10 significant comparisons for the BCT-AIT groups reflected differences of males trained in male only settings with the males and/or the females trained in gender-integrated settings. The direction of these differences was consistent and indicated less positive responses by males with single gender BCT. Five of the 10 comparison reflected differences between the two integrated samples. Four of those five were obtained for comparisons of responses made at reception or at the end of BCT. Thus, by the end of IET, males and females with gender-integrated BCT differed on only one variable, self-rated performance. However, it is again important to mention that most significant differences were small in magnitude (e.g., differences falling in the ranges of 0.03 - 0.41 and 0.04 - 0.28 at the ends of BCT and AIT, respectively).

Exceptions to the pattern of significant differences involved career intent at reception and satisfaction with MOS at the end of BCT. That is, the three BCT-AIT groups did not differ at these times in reported career intent and satisfaction with MOS. However, significant group differences following the general pattern emerged at later questionnaire administrations including these measures.

Tables 4 - 9 report means and results of analyses of variance for the secondary of soldiers having undergone OSUT. Interpretation of comparisons of the three OSUT groups is risky due to imbalances in the sample sizes and the MOS of the groups. However, Tables 4 - 9 show no evidence of an effect of gender-integration on male soldiers.

#### *Comparisons across Time*

*General finding.* Responses tended to be slightly less positive at the end of AIT than at the end of BCT for career intent and for three of the five measures of adaptation. The decline in adaptation tended to be less frequent for males with gender-integrated BCT.

*Basis for finding.* Differences between responses at BCT and AIT (see Table 10) were tested for the subset of soldiers that completed surveys at all three administrations. As shown in

Table 10  
Changes in mean survey responses of BCT-AIT soldiers by training type and gender.

Adaptation	Type of Training					
	Single Gender		Gender-Integrated			
	Males		Males		Females	
	Mean	SD	Mean	SD	Mean	SD
Career Intent	-0.36	1.37	-0.40	1.38	-0.38	1.19
Confidence	-0.24 <sup>I</sup>	0.77	-0.14 <sup>I</sup>	0.74	-0.19	0.72
Satisfaction with MOS	-0.08 <sup>II</sup>	1.27	0.05 <sup>II</sup>	1.18	0.04	1.17
Satisfaction with Soldier Life	-0.32	1.07	-0.26	1.03	-0.36	1.05
Satisfaction with Training	-0.21	0.87	-0.18 <sup>III</sup>	0.83	-0.30 <sup>III</sup>	0.81
Self-Ratings	0.02	0.85	0.08	0.8	0.10	0.83

*Notes.* Same superscripts denote significantly different means,  $p < .01$ . Changes were calculated by subtracting mean responses at the end of BCT from mean responses at the end of AIT. See Table 1 for sample sizes.



Table 10, the soldiers in all groups tended to report weaker career intentions at the end of AIT. Satisfaction with MOS and self-ratings of performance by soldiers in all three groups remained practically stable from the end of BCT to the end of AIT. All groups tended to give less positive responses on other three adaptation variables. As described earlier, average responses tended to remain favorable at the end of AIT despite this decline.

Significant group differences generally indicated that males in gender-integrated BCT became less negative than other soldiers. Satisfaction with MOS and confidence decreased significantly less for males with gender-integrated BCT than for males with single gender BCT. Comparison of males and females with gender-integrated BCT revealed that satisfaction with training declined from BCT to AIT to a lesser extent for males than for females.

## Discussion

### *Strengths and Limitations*

This research extended past efforts to determine the differential effects of single gender and gender-integrated entry training by investigating differences in the career intentions and adaptation by type of training through the end of IET. In the past, such variables have been investigated to the end of BCT only. The present research also controlled job or MOS type to reduce the risk of findings due to the differences in MOS associated with single gender and gender-integrated training.

However, the control of MOS potentially limited the generalizability of findings. That is, the principal sample consisted of soldiers that took AIT courses that were fed by soldiers who could have completed either a single gender or a gender-integrated BCT. This design excluded soldiers in AITs fed by only gender-integrated BCTs. This exclusion potentially restricted the range of AFQT scores and other related variables (e.g., length of AIT course).

To assess this possibility, the demographic characteristics of the BCT-AIT soldiers excluded from and included in the principal sample were compared to the demographic characteristics of all soldiers in the FY99 cohort (see Appendix B). These comparisons were revealing. As might have been expected, the excluded sample scored higher on the AFQT (had a higher average cognitive ability) than the FY99 cohort. Thus, for example, soldiers in high-AFQT MOS related to code analysis were excluded at a high rate. Despite the exclusion of such soldiers, the distributions of AFQT scores within the BCT-AIT soldiers included in the principal sample closely mirrored the distribution of AFQT scores in overall FY99 cohort. It is important to recognize that while future investigations might control cognitive ability more carefully than done here, comparisons between types of training cannot be made within all MOS.

Only those soldiers for whom there were questionnaire data at entry and at the end of either BCT or of OSUT survey data were included in the study samples. This produced a "longitudinal" sample but reduced the amount of the questionnaire data used. It is noteworthy that secondary analyses revealed comparable, cross-sectional results for analyses using all available BCT-AIT data.

### *Findings*

The similarity among groups suggests that there is no relationship between approach to training and the adaptation of soldiers. Few differences existed between groups in different training types, and the differences tended to be small. This finding is compatible with the findings of previous studies of gender integration, career intent, and attitudes toward training (Mottern et al., 1997; Harrell & Miller, 1997). Mottern et al. (1997) concluded that training in a gender-integrated environment had no negative effects for males but had positive effects for the performance and attitudes of females. Harrell & Miller (1997) found that gender integration, compared to other influences such as leadership and training, was perceived to have little effect on the readiness, cohesion, and morale of soldiers in their study.

With respect to adaptation, group differences in the current study were statistically significant but probably too small to indicate practical significance. Differences that were statistically significant tended to favor the integrated groups. The largest group difference found was in self-reported career intent. Males trained in male-only settings reported lower career intent than both of the other groups of soldiers.

Changes over time were similar for the three comparison groups. Changes within groups were generally small in magnitude and in a negative direction. Exceptions were observed for the confidence scale, predictions of self-ratings, and satisfaction with MOS; the trend for these variables was to remain steady or increase very slightly over time.

The lower career intent and confidence of single gender BCT-AIT males appeared as early as entry to the Army. This raises the possibility that all differences favoring gender-integrated soldiers reflected group differences at Army entry and the conservation of differences at later questionnaire administrations. That is, correlates of group differences other than those controlled (MOS) or examined (key demographics) accounted for differences favoring gender-integrated soldiers, and not aspects of their training experiences. While this is a possibility, other findings suggest the influence of time and/or experience over time. This suggestion comes in part from comparison of the magnitudes of change in the mean scores for career intent and confidence from reception until the end of AIT. For all groups, the magnitude of change was relatively greater with greater time, that is, from the end of BCT to the end of AIT than from reception to the end of BCT (see Tables 4 and 5). The influence of time/experience is also suggested by the tendency for less negative change during IET by gender-integrated males. This tendency was such that differences between single gender and gender-integrated males were relatively larger at the end of AIT than they were at the end of BCT.<sup>3</sup>

Satisfaction, especially satisfaction with MOS, was positively related to career intent and other variables, and correlations with satisfaction tended to increase during IET. Because soldiers are aware of but have little direct experience with their designated MOS at entry into the Army, it is logical that satisfaction with MOS will be more strongly related to career intent once the knowledge of one's MOS, soldier life and the nature of training has increased. The satisfaction items were experientially oriented and related to the experience of Army IET. Thus, the increases in the correlations of satisfaction add to the evidence of the effect of experience. MOS assignment is also something that Army practices can influence for improving overall Army satisfaction.

### *Conclusions*

Group differences in this study were statistically significant but probably too small to indicate practical significance. In general, the attitudes of soldiers in different training environments were similar and showed similar changes over time. Thus, the data suggest that training type has no appreciable negative effect on soldiers' career intent and adaptation.

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<sup>3</sup> Such a tendency does not rule out group differences but suggests at least an interaction between group differences and experience.



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## Appendix A: Excluded Sample

Table 1  
Excluded FY99 Soldiers by Training Type and Completed Surveys (Male only)

Type of Training	Surveys Available	
	At least Reception and End of BCT	Reception, End of BCT and End of AIT
<b>Single Gender</b>	399	20 out of 399
<b>Gender-Integrated</b>	594	55 out of 993
<b>Total</b>	993	75 out of 993

Table 2  
Demographics of Excluded FY99 Soldiers in Single Gender BCT.

Demographic Variable	Categories				
Race	White	Black	Other		
	62.7%	26.8%	10.5%		
	(65.3%)	(24.2%)	(10.5%)		
Age (in years)	17-21	22-30	31-35		
	77.4%	20.3%	2.3%		
	(70.5%)	(28.0%)	(1.5%)		
AFQT Category	I	II	IIIA	IIIB	IV
	4.0%	25.6%	30.9%	36.9%	2.5%
	(3.6%)	(29.5%)	(28.6%)	(35.2%)	(3.1%)
Education Tier	I	II	III		
	90.1%	9.9%	0.0%		
	(88.4%)	(11.5%)	(.1%)		

Note. Numbers not in parentheses describe male soldiers in single gender BCT (n=399). Numbers in parentheses describe the full FY99 Cohort (n=63,938).

**Table 3**  
**Demographics of Excluded FY99 Soldiers in Gender-Integrated BCT.**

Demographic Variable	Categories				
	White	Black	Other		
Race	73.7%	16.8%	9.4%		
	(65.3%)	(24.2%)	(10.5%)		
	17-21	22-30	31-35		
Age (in years)	77.3%	21.0%	1.7%		
	(70.5%)	(28.0%)	(1.5%)		
	I	II	IIIA	IIIB	IV
AFQT Category	15.7%	45.6%	22.4%	15.3%	1.0%
	(3.6%)	(29.5%)	(28.6%)	(35.2%)	(3.1%)
	I	II	III		
Education Tier	91.9%	8.1%	0.0%		
	(88.4%)	(11.5%)	(.1%)		

**Note.** Numbers not in parentheses describe male soldiers gender-integrated BCT (n=594).  
 Numbers in parentheses describe the full FY99 Cohort (n=63,938).

## Appendix B: Sample Demographics

Table 1  
Demographics of the Single Gender BCT-AIT Sample and the full FY99 Cohort.

Demographic Variable	Categories				
Race	White	Black	Other		
	61.3%	27.1%	11.6%		
	(65.3%)	(24.2%)	(10.5%)		
Age (in years)	17-21	22-30	31-35		
	78.2%	21.0%	0.8%		
	(70.5%)	(28.0%)	(1.5%)		
AFQT Category	I	II	IIIA	IIIB	IV
	3.5%	29.5%	28.9%	34.9%	3.2%
	(3.6%)	(29.5%)	(28.6%)	(35.2%)	(3.1%)
Education Tier	I	II	III		
	88.3%	11.5%	.1%		
	(88.4%)	(11.5%)	(.1%)		

Note. Numbers not in parentheses describe FY99 soldiers in single gender BCT (n=3620).  
Numbers in parentheses describe the entire FY99 cohort (n=63,938).

Table 2  
Demographics of the Male Gender-Integrated BCT-AIT Sample and the full FY99 Cohort.

Demographic Variable	Categories				
Race	White	Black	Other		
	65.5%	24.0%	10.5%		
	(65.3%)	(24.2%)	(10.5%)		
Age (in years)	17-21	22-30	31-35		
	73.6%	25.3%	1.1%		
	(70.5%)	(28.0%)	(1.5%)		
AFQT Category	I	II	IIIA	IIIB	IV
	4.0%	29.4%	27.4%	36.1%	3.2%
	(3.6%)	(29.5%)	(28.6%)	(35.2%)	(3.1%)
Education Tier	I	II	III		
	89.2%	10.8%	.1%		
	(88.4%)	(11.5%)	(.1%)		

Note. Numbers not in parentheses describe male FY99 soldiers in gender-integrated BCT (n=5029).  
Numbers in parentheses describe the entire FY99 cohort (n=63,938).



Table 3  
Demographics of the Female Gender-Integrated BCT-AIT Sample and the full FY99 Cohort.

Demographic Variable	Categories				
Race	White	Black	Other		
	52.4%	36.1%	11.6%		
	(65.3%)	(24.2%)	(10.5%)		
Age (in years)	17-21	22-30	31-35		
	71.1%	26.5%	2.4%		
	(70.5%)	(28.0%)	(1.5%)		
AFQT Category	I	II	IIIA	IIIB	IV
	3.6%	29.4%	27.0%	36.7%	3.2%
	(3.6%)	(29.5%)	(28.6%)	(35.2%)	(3.1%)
Education Tier	I	II	III		
	89.0%	11.0%	0.0%		
	(88.4%)	(11.5%)	(.1%)		

Note. Numbers not in parentheses describe female FY99 soldiers in gender-integrated BCT (n=1804). Numbers in parentheses describe the entire FY99 cohort (n=63,938).

Table 4  
Demographics of the Single Gender OSUT Sample and the full FY99 Cohort.

Demographic Variable	Categories				
Race	White	Black	Other		
	82.9%	9.1%	8.0%		
	(65.3%)	(24.2%)	(10.5%)		
Age (in years)	17-21	22-30	31-35		
	84.4%	15.0%	.06%		
	(70.5%)	(28.0%)	(1.5%)		
AFQT Category	I	II	IIIA	IIIB	IV
	3.8%	30.3%	28.4%	33.7%	3.7%
	(3.6%)	(29.5%)	(28.6%)	(35.2%)	(3.1%)
Education Tier	I	II	III		
	87.9%	12.0%	.1%		
	(88.4%)	(11.5%)	(.1%)		

Note. Numbers not in parentheses describe FY99 males in single gender OSUT (n=3138). Numbers in parentheses describe the entire FY99 cohort (n=63,938).

Table 5  
Demographics of the Male Gender-Integrated OSUT Sample and the full FY99 Cohort.

Demographic Variable	Categories				
Race	White	Black	Other		
	83.1%	11.9%	5.0%		
	(65.3%)	(24.2%)	(10.5%)		
Age (in years)	17-21	22-30	31-35		
	86%	13.4%	.6%		
	(70.5%)	(28.0%)	(1.5%)		
AFQT Category	I	II	IIIA	IIIB	IV
	5.2%	29.2%	30.0%	32.1%	3.5%
	(3.6%)	(29.5%)	(28.6%)	(35.2%)	(3.1%)
Education Tier	I	II	III		
	85.7%	14.1%	.2%		
	(88.4%)	(11.5%)	(.1%)		

Note. Numbers not in parentheses describe FY99 males in gender-integrated OSUT (n=480).  
Numbers in parentheses describe the entire FY99 cohort (n=63,938).

Table 6  
Demographics of the Female Gender-Integrated OSUT Sample and the full FY99 Cohort.

Demographic Variable	Categories				
Race	White	Black	Other		
	76.9%	15.6%	7.5%		
	(65.3%)	(24.2%)	(10.5%)		
Age (in years)	17-21	22-30	31-35		
	86.9%	11.9%	1.2%		
	(70.5%)	(28.0%)	(1.5%)		
AFQT Category	I	II	IIIA	IIIB	IV
	3.8%	27.0%	27.0%	39.6%	2.5%
	(3.6%)	(29.5%)	(28.6%)	(35.2%)	(3.1%)
Education Tier	I	II	III		
	91.8%	8.2%	0%		
	(88.4%)	(11.5%)	(.1%)		

Note. Numbers not in parentheses describe FY99 females in gender-integrated OSUT (n=3620).  
Numbers in parentheses describe the entire FY99 cohort (n=63,938).

## Appendix C: Survey Items<sup>4</sup>

### Career intent

Which ONE of the following best describes your current active duty Army career intentions?

- PROBABLY stay until retirement
- DEFINITELY stay until retirement
- PROBABLY stay in beyond my present obligation, but not necessarily to retirement
- DEFINITELY stay in beyond my present obligation, but not necessarily to retirement
- PROBABLY leave upon completion of my present obligation
- DEFINITELY leave upon completion of my present obligation
- Does not apply; I am not active duty Army

### Confidence

How confident are you that you will:

MARK A RESPONSE FOR EACH.

- a. Adapt to Army life
- b. Complete your term of obligation
- c. Meet the Army's physical requirements
- d. Earn promotions in the Army

- 1 Not Confident At All
- 2 Slightly Confident
- 3 Moderately Confident
- 4 Very Confident
- 5 Extremely Confident

### Satisfaction with MOS

How satisfied are you with your MOS?

- 1 Very dissatisfied
- 2 Dissatisfied
- 3 Neither satisfied nor dissatisfied
- 4 Satisfied
- 5 Very satisfied

### Satisfaction with Soldier Life

How satisfied are you with your life as an enlisted soldier?

- 1 Very dissatisfied
- 2 Dissatisfied
- 3 Neither satisfied nor dissatisfied
- 4 Satisfied
- 5 Very satisfied

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<sup>4</sup> Career intent and Confidence were measured at reception, end of BCT, and end of IET. The remaining items, satisfaction (with MOS, with soldier life, with training) and prediction of drill sergeant ratings, were measured at end of BCT and end of IET.

### Satisfaction with Training

How satisfied are you with the training you have received since you entered the Army?

- Very satisfied
- Satisfied
- Neither satisfied nor dissatisfied
- Dissatisfied
- Very dissatisfied

To what extent has your most recent training...

MARK A RESPONSE FOR EACH.

- a. contributed toward your professional development?
- b. instilled Army values?
- c. prepared you to perform your Army duties?
- d. prepared you for your future Army assignments?

- 1 No basis to judge
- 2 Not at all
- 3 Slight extent
- 4 Moderate extent
- 5 Great extent
- 6 Very great extent

### Prediction of Drill Sergeant Ratings

Suppose your drill sergeants were to compare your performance to other soldiers in your training company.

How would they rate your...

- a. EFFORT (such as willingness to give your best effort and assist other to make sure the job gets done)
- b. PERSONAL DISCIPLINE (such as willingness to follow Army regulations, orders, and Standard Operating Procedure, and display respect for superiors)
- c. PHYSICAL FITNESS (effectiveness in maintaining military standards of physical fitness)
- d. OVERALL EFFECTIVENESS IN MOST RECENT TRAINING

- 1 Below average (bottom 30%)
- 2 Average (middle 40%)
- 3 Above Average (upper 30%)
- 4 Outstanding (upper 15%)
- 5 Truly exceptional (top 5%)